

CLAIMS LISTING

1. (canceled).
2. (canceled).
3. (canceled).
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28. (canceled).
29. (canceled).
30. (canceled).
31. (currently amended) A pharmaceutical product for vaccination of vertebrates, the pharmaceutical product comprising genetically modified pollen grains, the pollen grains comprising:
 - a) a the last 616 bp of an AtGRP17 gene promoter sequence ~~of glycine-rich protein gene AtGRP17~~ of *A. thaliana*;
 - b) a coding sequence of the AtGRP17 gene translationally fused to a coding sequence of a heterologous polypeptide, wherein both the promoter sequence and the coding sequences are present in the genome of the pollen grains; and
 - c) a the heterologous polypeptide coded by said the coding sequence of the AtGRP17 gene translationally fused to the coding sequence of the heterologous polypeptide being present in the outer surface of the pollen grain.
32. (canceled).
33. (currently amended) The pharmaceutical product according to claim 4 31, wherein the heterologous polypeptide is selected from the group consisting of eukaryotic antigens, prokaryotic antigens, viral antigens, synthetic antigens, therapeutic peptides, peptidic hormones, cytokines, interleukins, and combinations thereof.

34. (new) The pharmaceutical product according to Claim 31, comprising 5 μ g to 50 μ g of the pollen grains per 250g to 350g of body weight of the vertebrates.
35. (new) A pharmaceutical product for vaccination of vertebrates, the pharmaceutical product comprising genetically modified pollen grains, the pollen grains comprising:
 - a) the coding sequence SEQ1 under control of the last 616 bp of the promoter sequence SEQ2;
 - b) the coding sequence SEQ1 being translationally fused to a coding sequence of a heterologous polypeptide, wherein both the promoter sequence and the coding sequences are present in the genome of the pollen grains; and
 - c) the heterologous polypeptide coded by the coding sequence SEQ1 translationally fused to the coding sequence of the heterologous polypeptide being present in the outer surface of the pollen grain.
36. (new) The pharmaceutical product according to claim 35, wherein the heterologous polypeptide is selected from the group consisting of eukaryotic antigens, prokaryotic antigens, viral antigens, synthetic antigens, therapeutic peptides, peptidic hormones, cytokines, interleukins, and combinations thereof.
37. (new) The pharmaceutical product according to Claim 35, comprising 5 μ g to 50 μ g of the pollen grains per 250g to 350g of body weight of the vertebrates.